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EXAMINER	
HAMILTON, CYNTHIA	

ART UNIT	PAPER NUMBER
1752	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/526,484	XU, JIGENG	
	Examiner	Art Unit	
	Cynthia Hamilton	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/04/5,3/4/5,*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/4/5*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

STATUTES :

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (c) he has abandoned the invention.
>
> (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (f) he did not himself invent the subject matter sought to be patented.
>
> (g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Rest of the Action

2. Claims 32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim s 32-34 are provides for the use of "a curable rapid prototyping composition", but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

3. Claims 32-34 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

4. Claim 28 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 28 is as follows:

> **28. (original) A curable composition having an E10 cure speed of less than 80 mJ/cm2 and, after cure by radiation and heat, a heat deflection temperature (1.82 MPa) of at least 125°C and an elongation at break of at least 2.5%.**

Applicants have claimed every curable composition having the combined properties of cure speed, and after cure the product made from the composition having a specific elongation of break and heat deflection temperature. Thus, applicants have claimed the composition only as that which have the means of obtaining these three properties without a single means of obtaining these properties. In consideration of MPEP 2164.08(a), the examiner holds that claim 28, claims a non-enabling invention in that applicants have claimed every conceivable curable composition for achieving the stated properties while the specification discloses at most only those know to the inventor. The properties desired are not claimed in combination with elements to achieve those ends. The undue experimentation factors are the breadth of the claim and the nature of the invention. Applicants claim any curable composition with a cure speed of E10 less than 80 mj/cm2. Applicants claim any composition that had this desired cure speed that after cure by radiation and heat in any fashion whatsoever has a heat deflection temperature of 125 degrees C and an elongation at break of at least 2.5%. There is no process of cure set forth other than radiation or heat. Thus, applicants set forth one property of the composition then

two properities of a cured product made from the composition as besides the requirement of curability in some fashion as the limitations. No process of cure is given to get to the properties whatsoever with respect to the properties of the product obtained by the assumed intended use of the composition claimed. Applicants on pages 19-20 of their specification teach the following:

> *(e) E10, D_p, and E_c*
>
> The photoproperties E_c (mJ/cm^2), D_p (µm), and E10 (mJ/cm^2) represent the photoresponse (in this case thickness of layer formed) of a particular formulation to exposure by a single wavelength or range of wavelengths. In the instant Examples and Comparative Examples, at least 20 grams of composition was poured into a 100 mm diameter petri-dish and allowed to equilibrate to approximately 30°C and 30% RH. The samples were then scanned in a line-by-line fashion using a focused laser beam of approximately 100-140 mW. The laser, a frequency tripled YAG laser, had an output wavelength of 354.7 nm and was pulsed at 80 KHz. The exposures were made in a square pattern approximately 20 mm by 20 mm. Six individual exposures were made at near constant laser power but at various scan speeds. The parallel scan lines making up each exposure were drawn approximately 50 µm apart. Based upon knowledge of the diameter of the focused beam at the liquid surface, the scan speed, the laser power, and the scan spacing, the summation of exposure mJ/cm^2 was calculated. Each square was allowed to float on the surface of the petri-dish for approximately 15 minutes. Then the squares were blotted and a thickness measurement was taken using Mitutoyo NTO25-8"C spring loaded Absolute Digimatic calipers. When the natural log of the exposures is plotted against the measured thickness a least squares fit line can be drawn. The D_p (µm) is the slope of the least squares fit line. The E_c (mJ/cm^2) is the X-axis crossing point (Y=0) of the line. And the E10 is the energy necessary to produce a layer approximately 10 mils (254 µm) thick. In general, the lower the E10 number, the faster the photospeed of the composition.

Thus, E10 is a property not solely dependent upon composition but depends upon wavelength of electromagnetic radiation used. Thus, the invention of claim 28 is that with an E10 at any

wavelength for any curable composition. There is no limitation to a specific wavelength or set of wavelengths. There is no requirement for epoxy, acrylate, polyimide, etc. Thus, the examiner believes that the composition of claim 28 is not sufficiently enabled by the disclosure made by applicants because of the amount of undue experimentation required to determine the metes and bounds of the curable composition claimed.

5. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Furukawa et al (3,368,995). Example 16 of Furukawa et al anticipates the instant composition of claim 28 before cure with an E10 cure speed of zero at some wavelength.

6. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Christie (3,394,105). With respect to instant claim 28, the composition of Example 1 cured as in Example II anticipates the instant composition with zero E10 cure speed, percent elongation at break of 3.5 % and heat deflection temperature of 145 degrees C.

7. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Marquis et al (4,162,358). With respect to instant claim 28, the compositions cured to obtain the materials of Table 1 of Marquis et al anticipate the instant composition with zero E10 cure speed.

8. Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Verleg et al (5,286,832). With respect to instant claim 28, the composition cured to obtain the material of Table 1 of Verleg et al anticipates the instant composition.

9. The examiner notes that "full cure" is referenced by applicants on page 18 with respect to one specific process as follows with boxing of significant terms being added by this examiner:

(a) Tensile Strength, Young's modulus, and Elongation at Break

Tensile data was obtained by testing tensile bars ("dogbones") made by first consecutively imaging 150µm thick layers of the composition to be tested in a rapid prototyping machine. Each cross-sectional layer of the tensile bar was given exposure sufficient to polymerize the composition at a 250 µm depth, providing approximately 100 µm of overcure or engagement cure to assure adhesion to the previously coated and exposed layer. The layers were exposed with a laser emitting in the ultraviolet (UV) region at 354.7 nm. The resulting tensile bars/dogbones were approximately 150 mm long and had a cross-section in the narrowed portion of approximately 1cm x 1cm. After preparation of the tensile bar in the rapid prototyping machine, the tensile bar was removed from the machine, washed with tri(propyleneglycol) methyl ether ("TPM") and isopropanol, and placed in a post-curing apparatus ("PCA" sold by 3-D Systems, 10 bulb unit using Phillips TLK/05 40W bulbs). In the PCA, the tensile bar was post-cured first by subjecting it to 60 minutes of UV radiation at room temperature. After these 60 minutes, the UV radiation was stopped and the tensile bar was subjected to 160°C for two hours. The procedure of rapid prototyping a composition and post-curing a composition in the manner just described is understood herein to result in fully cured samples. The tensile tests to determine tensile strength, Young's modulus, and elongation at break were run one day after preparation of the tensile bar and in accordance with ASTM D638, which is hereby incorporated in its entirety by reference, except that no provision was made for controlling the room temperature and humidity and the bars were not equilibrated for 2 days. The reported data is the average of three measurements.

The examiner also notes that all explicitly disclosed working examples have a minimum of epoxies, oxetanes and acrylates present as well as photoinitiators.

10. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants reference a "viscosity of less than 750 mPas" at 30 degrees C. There is no measurement for viscosity at mPas but there is an mPa.s. The examiner believes this is

what is meant and has used this measurement when comparing different units. Thus, the limits of claim 24 are unclear. APAG, the Wikipedia and The Engineering Tool Box are cited as references to support the examiner's position.

11. Claims 1, 3-4, 9, 15, 18-26, 28 and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Edwards et al (5,081,168) as evidenced by Sellet (3674,415). With respect to instant claims 1, 3-4, 9, 15, 18-26, 28 and 31-34, the compositions in the Examples of Edwards anticipate the instant compositions, cured objects and uses. The liquid Epoxy Resin of Edwards et al is diglycidyl ether of 2,2-bis(4-hydroxyphenyl)propane thus clearly an aromatic epoxy resin, diglycidyl Ether NPG is neopentyl glycol glycidyl ether thus an aliphatic epoxy, and Epoxide 8 is C 12 –C 14 alkyl glycidyl ether available from Shell Chemical Co. with Sellet et al disclosing in col. 10 lines 55-col.11, lines 3, that Epoxide 8 is a mono epoxide compound mixture. Epoxide 8 is also clearly aliphatic. The cured articles of Edwards are not obtained by the process of claim 30 but are inherently "obtainable" in that method. Since every composition in Edward is used then use is anticipated as well. An E10 cure speed of zero is less than 80 mJ/cm2 and an elongation oat break of these compositions is inherently within the range claimed. With respect to instant claim 2, the diglycidyl ether of bis(4-hydroxyphenyl)propane used in the examples has a variable epoxy equivalence indicating that it is inherently a mixture of aromatic epoxide compounds.

12. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards et al (5,081,168) as applied to claim 1 above. With respect to instant claim 2, While the examples of Edwards et al do not explicitly disclose a mixture of aromatic epoxy compounds in their compositions, they do disclose their use in col. 3 and specifically in col. 3 lines 45-51 with a "

preferred epoxy resin includes a mixture of diglycidyl ethers of bisphenol-A and bisphenol-F because of the reduced tendency of such a mixture to crystallize when stored." Thus, the use of such a mixture in the compositions fitting the general properties of the working examples would have been prima facie obvious to reduce the tendency of crystallization during storage. With respect to the required heat deflection temperatures of instant clam 2, Edwards et al desire that their "cured epoxy resin composition develops sufficient physical properties to be placed in service at temperatures up to about 93.degree. C. The cured composition has a heat deflection temperature of about

132.degree. C. "

13. Claims 1-3, 7-9, 11-17, 20-26 and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Pang et al (6,100,007). With respect to instant claims 1-3, 7-9, 11-17, 20-26 and 29-31, the compositions and methods of imaging as well as products produced by Pang et al with respect to the compositions set forth in TABLE 1 anticipate the instant invention and have inherently the required E10, heat deflection temperature, viscosity and elongation at break limits as required. The compositions used with respect to components are overlapping with those of applicants in their working examples. The examiner has noted that the HDT in Pang et al is run at a lower pressure if considering the meaning of "(1.82 MPa)" references load. In Pang et al, see particularly col. 1, lines 48-55.

14. Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. What is meant by "heat deflection temperature (1.92 MPa)" in claims 1-31 is not clear. Is this a limit on heat deflection temperature? Thus, claims 1-31 are vague with respect to

the limits As it is written the (1.92 MPa) does not in any way limit heat deflection temperature. of (1.92 MPa).

15. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 18 reads as follows:

> **18. (currently amended) The composition according to ~~any one of claims 1-17~~ claim 1, wherein said composition comprises about 0-4 wt% of hydroxy-functional components that are absent a curable group and are not selected from the group consisting of photoinitiators.**

Since hydroxy-functional components are inherently possessed of a "curable group" in that they have a hydroxy group, the wording of claim 18 makes no sense. Thus, claim 18 is confusing.

16. Claims 1, 3, 5-9, 11-13, 15-26, and 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Thies et al (WO 03/093901 A1) as evidenced by US Provisional Application No. 60/377239.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The examiner notes that WO 03/093901 has a possible effective filing date of May 3, 2003 because the International Application for Thies et al was filed after November 11, 2000, in English and US is cited as a Designated State. Thus, for those parts of Thies et al which are fully

disclosed both in WO 03/093901 A1 and US Provisional Application No. 60/377239 the effective filing date antedates applicants' earliest possible filing date of October 18, 2002. With respect to instant claims 1, 3, 5-9, 11-13, 15-26, and 28-31, the Examples 12 and 13 of Thies et al which are present both in WO 03/093901 A1 and US Provisional Application No. 60/377239 anticipate the instant composition, method of making and object made. The E10 is given and the averagle Elongation at break is given. With respect to heat deflection temperature, the compositions of Theis et al are so close to that of applicants' compositions that they must inherently have the required property set forth. The examiner notes that Thies et al have epoxy blend, acrylate and oxetane present as required as well.

17. Claims 1, 5-9, 11, 13, 15, 17, 19-26 and 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagiwara et al (JP 11-199647 and Abstract and English machine translation attached). With respect to instant claims 1, 5-9, 11, 13, 15, 17, 19-26 and 28-31, the composition, method and article made of Hagiwara et al with Example 3 anticipates the instant invention yielding a composition inherently having the properties set forth.

18. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

19. Claims 1-31 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-31 of copending Application No. 11/282,842. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

20. Claims 5-6 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-2 of copending Application No. 11/282,842. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

21. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al (JP 11-199647 and Abstract and English machine translation attached) or Thies et al (WO 03/093901 A1) as evidenced by US Provisional Application No. 60/377239 or Pang et al (6,100,007), or Edwards et al (5,081,168) as applied to claim1 above, and further in view of Neckers (5,514,519) or Popat et al (6,133,336) or Nguyen et al. (CA 2 324 794 A1 or US 6664024). The addition of color changing components to stereolithographic compositions is well known in the art. With respect to instant claim 27, the addition of color changing components to the compositions of Hagiwara et al (JP 11-199647 and Abstract and English machine translation attached) or Thies et al (WO 03/093901 A1) as evidenced by US Provisional Application No. 60/377239 or Pang et al (6,100,007), or Edwards et al (5,081,168) for the reasons of Nguyen et al which adds a component that goes from colorless to colored in order to avoid the reduction of shaping speed and deterioration of mechanical properties as set forth on pates 2-3, or for the reasons set forth by Neckers of giving to the final model distinct color differentiation of one part from another of the same model or for the reasons fo Popat et al for forming a selectively colored ornamental and industrial article such as a medical article would

have made prima facie obvious the addition of such to any stereolithographic composition of similar nature for the same reasons.

22. Claims 1-4, 7-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Lapin et al (WO97/42549). With respect to instant claims 1-4 and 7-34, the disclosures of Lapin et al at abstract, claims 1-4,11, page 5, lines 15-oage7, line35; page2,line29-page4,line13, examples 1-1V, ecamples page 8, line 1 page 16, line35; claims 112-14) appear to be anticipatory for the subject mater of the present claims and have inherently the physical properties set forth.

23. Claims 1, 3-4, 7, 9-11, 13-14, 17, 19-26, 38-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Lawton et al (US 5,707,780). With respect to instant claims 1-4 and 7-34, the disclosures of Lawton et al appear to be anticipatory for the subject mater of the present claims and have inherently the physical properties set forth. In Lawton et al, see particularly abstract, claims 1-2, col. 4, lines 54-58, 61-67; col. 5, lines 5-8; col. 3,lines 1 –col. 9, line 63.

24. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hagiwara et al (JP 11-199647 and Abstract and English machine translation attached) or Thies et al (WO 03/093901 A1) as evidenced by US Provisional Application No. 60/377239 or Pang et al (6,100,007), or Edwards et al (5,081,168) as applied to claim1 above, and further in view of Hatton (WO 01/18995 A1). The addition of oxetanes to increase photospeed and the additono fo monoepoxy compounds as plasticizers to stereolithographic compositions is well known in the art as taught by Hatton. With respect to instant claim 10, the addition of such to the compositions of Hagiwara et al (JP 11-199647 and Abstract and English machine translation attached) or Thies et al (WO 03/093901 A1) as evidenced by US Provisional Application No. 60/377239 or Pang et

al (6,100,007), or Edwards et al (5,081,168) for these reasons would have been prima facie obvious.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is 571-272-1331. The examiner can normally be reached on Monday through Friday 9:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571) 272-0729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Cynthia Hamilton
Primary Examiner
Art Unit 1752

June 23, 2006